Practitioner's Docket No. 2229/142

**PATENT** 

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Bhat et al.

Application No.: 10/615,538

Group Art Unit: Not Yet Assigned

Filed:

July 8, 2003

Examiner:

Not Yet Assigned

For:

Method and Device for Bearing Seal Pressure Relief

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

# TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT WITHIN THREE MONTHS OF FILING OR BEFORE MAILING OF FIRST OFFICE ACTION (37 C.F.R. § 1.97(b))

NOTE: "An information disclosure statement shall be considered by the Office *if* filed by the applicant. (1) within three months *of* the filing date *of* a national application; (1) within three months *of* the date *of* entry *of* the national stage as set forth in § 1.491 In an International application; or (3) before the mailing date *of* a first Office action on the merits, whichever event occurs last." *37 CF.R.* § 1.97(b)

#### CERTIFICATE of MAILING/TRANSMISSION (37 C.F.R. § 1.8(a))

I hereby certify that this correspondence is, on the date shown below, being:

#### MAILING

**FACSIMILE** 

deposited with the United States Postal Service with sufficient postage as first class

☐ transmitted by facsimile to the Patent and Trademark Office.

mail, in an envelope addressed to the Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450

Date: February 9, 2004

John L. Conway

(type or print name of person certifying)

(Transmittal of Information Disclosure Statement Within Three Months of Filing or Before Mailing of First Office)

NOTE: The "filing date of a national application" under 37 C.F.R. § 1.97(b) has two possible meanings. Where the filing is a direct one to the United States Patent & Trademark Office, the filing is defined in 37 C.F.R. § 1.53(b) as "the date on which: (1) A specification containing a description pursuant to § 1.71 and at least one claim pursuant to § 1.75; and (2) any drawing required by § 1.81(a), are filed in the Patent and Trademark Office in the name of the actual inventor or inventors as required by § 1.41." 37 C.F.R. § 1.97(b)(1). On the other hand, an international application that enters the national stage occurs when the applicant has filed the documents and fees required by 35 U.S.C. § 371(c) within the periods set forth in § 1.494 or § 1.495. 35 U.S.C. § 371(c) requires the filing of the following: (1) the basic national fee; (2) a copy of the international application, unless already sent by the International Bureau, and optionally an English translation into English if made in another language; (4) an oath or declaration; and (5) a translation into English of any annexes to the international preliminary examination report, if such annexes were made in another language. The optional items must be submitted later, with surcharges. 37 C.F.R. § 1.97(b)(2).

## IDENTIFICATION OF TIME OF FILING THE ACCOMPANYING INFORMATION DISCLOSURE STATEMENT

The information disclosure statement submitted herewith is being filed within three months of the filing date of the application or date of entry into the national stage of an international application or before the mailing date of a first Office action on the merits, whichever event occurs last. 37 C.F.R. § 1.97(b).

NOTE: "No certification or fee is due when the filing Is made within the above time period. It is advisable to ensure that no Office action has been mailed if the disclosure statement is delayed until after three months from filing."

NOTE: "An information disclosure statement will be considered to have been filed on the day it was received in the Office, or on an earlier date of a mailing if accompanied by a properly executed certificate of mailing under 37 C.F.R. 1.8, or Express Mail certificate under 37 C.F.R. 1.10. An Office action is mailed on the date Indicated in the Office action." Notice of April 20, 1992 (1138 O.G. 37-41, 39).

NOTE: "The term national application' Includes continuing applications (continuations, divisions, continuations-in-part) so three-months will be measured from the actual filing date of an application as opposed [sic] to the effective date of a continuing application." Notice of April 20, 1992 (1138 O.G. 37-41, 39).

NOTE: "An action on the merits means an action which treats the patentability of the claims in an application, as opposed to only formal or procedural requirements. An action on the merits would, for example, contain a rejection or indication of allowability of a claim or claims rather than just a restriction requirements (37 CF.R. 1.142) or just a requirement for additional fees to have a claim considered (37 C.F.R. 1.16(d)). Thus, if an application was filed on Jan. 1 and the first Office action on the merits was not mailed until six months later on July 1, the examiner would be required to consider any proper information disclosures statement filed prior to July 1." Notice of April 20, 1992 (1138 O.G. 37-41, 39).

WARNING: "A petition for suspension of action to allow applicant time to submit an information disclosure statement will be denied as failing to present good and sufficient reasons, since 37 C.F.R. § 1.97 provides adequate recourse for the timely submission of prior art for consideration by the examiner.' Notice of July 6, 1992 (1141 O.G. 63).

Reg. No.: 48,241

Signature of Practitioner

Tel. No.: 617/443-9292

John L. Conway

Customer No.: 002101

Bromberg & Sunstein LLP 125 Summer Street, Boston, MA 02110

(Transmittal of Information Disclosure Statement Within Three Months of Filing or Before Mailing of First Office Action)



Practitioner's Docket No. 2229/142

**PATENT** 

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Bhat et al.

Application No.: 10/615,538

Group Art Unit: Not Yet Assigned

Filed:

July 8, 2003

Examiner:

Not Yet Assigned

For:

Method and Device for Bearing Seal Pressure Relief

**Commissioner for Patents** 

P.O. Box 1450

**Alexandria, VA 22313-1450** 

#### INFORMATION DISCLOSURE STATEMENT

#### CERTIFICATE UNDER 37 C.F.R. § 1.8(a) and 1.10\*

(When using Express Mail, the Express Mail label number is **mandatory**; Express Mail certification is optional.)

I hereby certify that this correspondence is, on the date shown below, being:

#### MAILING

deposited with the United States Postal Service in an envelope addressed to the Commissioner for Patents P.O. Box 1450, Alexandria, VA 22313-1450

37 C.F.R. § 1.8(a)

37 C.F.R. § 1.10\*

with sufficient postage as first class mail.

_	as	Express in	nan Post	Onice	to Addres	ssee	
<b>Mail</b> i	ng	Label No.				(mandator	y)

#### **TRANSMISSION**

☐ transmitted by facsimile to the Patent and Trademark Office.

Date: February 9, 2004

Signature

John L. Conway

(type or print name of person certifying)

- NOTE: "An information disclosure statement shall be considered by the Office if filed by the applicant within any one of the following time periods:
  - Within three months of the filing date of a national application other than a continued prosecution application under § 1.53(d);
  - (2) Within three months of the date of entry of the national stage as set forth in § 1.491 in an international application;
  - (3) Before the mailing date of a first Office action on the merits; or
  - (4) Before the mailing date of a first Office action after the filing of a request for continued examination under § 1.114."

37 C.F.R. § 1.97(b).

NOTE: "Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section." 37 C.FR. § 1.56(a).

"Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

- (1) each inventor named in the application;
- (2) each attorney or agent who prepares or prosecutes the application; and
- (3) every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application." 37 C.F.R. § 1.56(c).

NOTE: The "duty as described in § 1.56 will be met so long as the information in question was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98 before issuance of the patent." Notice of January 9, 1992, 1135 O. G. 13 -25 at 17.

WARNING: "No information disclosure statement maybe filed in a provisional application." 37 C.FR. § 1.51(d).

#### **List of Sections Forming Part of This Information Disclosure Statement**

The following sections are being submitted for this Information Disclosure Statement: (check sections forming a part of this statement: discard unused sections and number pages consecutively)

- 1. Preliminary Statements
- 2. FORMS PTO/SB/08A and 08B (formerly FORM PTO-1449)
- 3. 

  Statement as to Information Not Found in Patents or Publications
- 4. ☐ Identification of Prior Application in Which Listed Information Was Already Cited and for Which No Copies Are Submitted or Need Be Submitted
- 5. 

  Cumulative Patents or Publications
- 6. Copies of Listed Information Items Accompanying This Statement
- 7. Concise Explanation of Non-English Language Listed Information Items
  - 7A. 

    EPO Search Report
  - 7B. 

    English Language Version of EPO Search Report
- 8. Translation(s) of Non-English Language Documents
- 9. Non-printed Information Which May be Material To Examination of the Application
- 10. Identification of Person(s) Making This Information Disclosure Statement

NOTE: "Once the minimum requirements are met the examiner has an obligation to consider the information." Notice of April 20, 1992 (1138 O.G. 37-41, 37).

#### **Section 1. Preliminary Statements**

Applicants submit herewith patents, publications or other information, of which they are aware that they believe may be material to the examination of this application, and in respect of which, there may be a duty to disclose.

The filing of this information disclosure statement shall not be construed as a representation that a search has been made (37 C.F.R. § 1.97(g)), an admission that the information cited is, or is considered to be, material to patentability, or that no other material information exists.

The filing of this information disclosure statement shall not be construed as an admission against interest in any manner. Notice of January 9, 1992, 1135 O.G. 13-25, at 25.

Applicants disclose herewith all references, as listed in Section 2, that have been considered by their counsel in regard to this application. In the best judgment of counsel, none of the references are more material to the examination of this application than those designated by the symbol "#" in the right-hand column. Designation of a reference by a "#" symbol does not constitute an admission that such a reference constitutes prior art that is relevant to any particular claim presented in the application.

(Information Disclosure Statement—Section 1. Preliminary Statements [6-1]--)

## SECTION 2. FORMS PTO/SB/08A and 08B (formerly Form PTO-1449)

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Bhat et al.

Application No.: 10/615,538

Group Art Unit: Not Yet Assigned

Filed:

July 8, 2003

Examiner:

Not Yet Assigned

For: Method and Device for Bearing Seal Pressure Relief

# LIST OF PATENTS AND PUBLICATIONS FOR APPLICANTS' INFORMATION DISCLOSURE STATEMENT <u>United States Patents</u>

Ref.	U.S. Patent No.	Inventor	Issue Date	Exam. Init.	See Sec. 1
1	55,516	Winans, W. L., et al.	Jun. 12, 1866		
2	120,222	Van Emon, S.	Oct. 24, 1871		
3	124,805	Fryer, R.	Mar. 19, 1872		
4	321,313	Pinkham, D.	Jun. 30, 1885		
5	488,373	Touch, J.E.	Dec. 20, 1892		
6	646,406	Anderson, C.A., et al.	Apr. 3, 1900		
7	1,089,651	Kovalavich, G.	Mar. 10, 1914		
8	1,769,375	Leary, J.C.	Jul. 1, 1930		
9	1,831,574	Norton, E.C.	Nov. 10, 1931		
10	1,840,389	Eubank, C.E.	Jan. 12, 1932		
11	1,866,702	Gehres, H.A.	Apr. 15, 1930		
12	2,170,099	Stubings, A.J.	Aug. 22, 1939		
13	2,176,657	Finch, J.L.	Oct. 17, 1939		
14	2,289,984	Mouromtseff et al.	July 14, 1942		
15	2,337,294	Cooper, J.H.	Dec. 21, 1943		
16	2,419,234	Holihan, I.T.	Apr. 22, 1947		
17	2,564,100	Du Pré	Aug. 14, 1951		

C. P. S.	U.S. Patent No.	Inventor	Issue Date	Exam. Init.	See Sec. 1
	2, 595.457	S. Holm et al.	May 6, 1952		
19	2,688,228	De Brey,H. et al.	Sep. 7, 1954		
20	3,059,418	Johnston, R.D.	Oct. 23, 1962		
21	3,293,480	Green, E.G.,et al.	Dec. 20, 1966		
22	3,431,788	De Pré, F.K.et al	Mar. 11, 1969		
23	3,742,578	Dirne et al.	Jul. 3, 1973		
24	3,775,973	Hudson	Dec. 4, 1973		
25	3,782,457	Troy	Jan. 1, 1974		
26	3,860,384	Vulliet et al.	Jan. 14, 1975		
27	3,861,223	Braun	Jan. 21, 1975		-
28	3,924,477	Portelance	Dec. 9, 1975		
29	3,940,933	Nystrom	Mar. 2, 1976		
30	4,008,039	Compton et al.	Feb. 15, 1977		
31	4,020,635	Joynes et al.	May 3, 1977		
32	4,041,592	Kelm	Aug. 16, 1977		
33	4,067,191	Gronvall et al.	Jan. 10, 1978		
34	4,085,588	Reams et al.	Apr.25, 1978		
35	4,169,692	McDonough et al.	Oct. 2, 1979		
36	4,172,363	Bex	Oct. 30, 1979		
37	4,191,241	Brennan	Mar. 4, 1980		
38	4,231,222	Fenton	Nov. 4, 1980		
39	4,305,457	Cozzolino	Dec. 15, 1981		
40	4,313,080	Park	Jan. 26, 1982		
41	4,330,260	Jorgensen et al.	May 18, 1982		
42	4,330,992	Senft	May 25, 1982		,
43	4,343,350	Campbell et al.	August 10, 1982		
44	4,445,570	Retallick	May 1, 1984		
45	4,511,805	Boy-Marcotte et al.	Apr. 16, 1985		
46	4,364,724	Alpkvist	Dec. 21, 1982	47	

1 E	l				
Reference 47	U.S. Patent No.	Inventor	Issue Date	Exam. Init.	See Sec. 1
47	4,384,457	Harvey	May 24, 1983		
48	4,387,568	Dineen	Jun. 14, 1983		
49	4,413,475	Moscrip	Nov. 8, 1983		
50	4,416,114	Martini	Nov. 22, 1983		
51	4,434,617	Walsh	Mar. 6, 1984		
52	4,442,670	Goldman	Apr. 17, 1984		
53	4,527,394	Corey	Jul. 9, 1985		
54	4,538,677	Bódás, et al.	Sep. 3, 1985		
55	4,573,320	Kralick	Mar. 4, 1986		
56	4,633,667	Watanabe et al.	Jan. 6, 1987		
57	4,662,176	Fujiwara et al.	May 5, 1987		
58	4,676,202	Johnson	Jun. 30, 1987		
59	4,736,586	Kawajiri et al.	Apr. 12, 1988		
60	4,768,341	Nozaki et al.	Sep. 6, 1988	· · · · · · · · · · · · · · · · · · ·	
61	4,824,149	Reuchlein	Apr. 25, 1989		
62	4,881,372	Naito	Nov. 21, 1989		
63	4,898,041	Islas	Feb. 6, 1990		
64	4,901,790	Meijer	Feb. 20, 1990		
65	4,996,841	Meijer et al.	Mar. 5, 1991		
66	4,824,149	Reuchlein	Apr. 25, 1989		
67	4,881,372	Naito	Nov. 21, 1989		
68	4,898,041	Islas	Feb. 6, 1990		
69	4,901,790	Maijer	Feb. 20, 1990		
70	4,996,841	Meijer et al.	Mar. 5, 1991		
71	4,977,742	Meijer	Dec. 18, 1990		
72	5,003,777	Berchowitz	Apr. 2, 1991		
73	5,005,349	Momose et al.	Apr. 9, 1991	,	
74	5,065,579	Monahan	Nov. 19, 1991		
75	5,074,114	Meijer et al.	Dec. 24, 1991		
		<del></del>		I .	- 1

Rec	U.S. Patent No.	Inventor	Issue Date	Exam. Init.	See Sec. 1
18.76	5,095,701	Nakano	Mar. 17, 1992		
77	5,148,066	Beale et al.	Sep. 15, 1992		
78	5,174,117	Naito et al.	Dec. 19, 1992		
79	5,199,722	Wada et al.	Apr. 6, 1993		
80	5,203,170	Naito	Apr. 20, 1993		
81	5,228,293	Vitale	Jul. 20, 1993		
82	5,590,526	Cho	Jan. 7, 1997		
83	5,441,401	Yamaguro et al.	Aug. 15, 1995		
84	5,494,135	Brackett	Feb. 27, 1996		
85	5,522,214	Beckett et al.	Jun. 4, 1996		
86	5,596,262	Boli	Jan. 21, 1997		
87	5,642,618	Pennswick	Jul. 1, 1997		
88	5,675,974	Heikrodt et al.	Oct. 14, 1997		
89	5,697,430	Thors et al.	Dec. 16, 1997		
90	5,735,681	Cheng	Apr. 7, 1998		
91	5,743,091	Penswick et al.	Apr. 28, 1998		-
92	5,755,100	Lamos	May 26, 1998		
93	5,761,985	Stoll	Jun. 9, 1998		
94	5,771,694	Houtman et al.	Jun. 30, 1998		
95	5,786,640	Sakai et al.	Jul 18, 1998		
96	5,864,770	Ziph et al.	Jan. 26, 1999		
97	5,804,947	Nii et al.	Sep. 8, 1998		
98	5,875,863	Jarvis et al.	Mar. 2, 1999		
99	5,878,570	Reithofer	Mar. 9, 1999		
100	5,881,800	Chung	Mar. 16, 1999		
101	5,920,133	Penswick et al.	Jul. 6, 1999		
102	5,921,764	Marchionna et al.	Jul. 13, 1999		
103	5,929,538	O'Sullivan et al.	Jul. 27, 1999		
104	5,945,808	Kikuchi et al.	Aug. 31, 1999		

100 X		•			
Ref.	U.S. Patent No.	Inventor	Issue Date	Exam. Init.	See Sec. 1
105	5,952,813	Ochiai	Sep. 14, 1999		
106	5,954,039	Doering et al.	Sep. 21, 1999		
107	6,050,092	Genstler et al.	Apr. 18, 2000		#
108	6,062,023	Kerwin et al.	May 16, 2000	-	
109	6,161,381	Lohrmann	Dec. 19, 2000		
110	6,161,610	Azar	Dec. 19, 2000		
111	6,247,310 B1	Norris et al.	Jun. 19, 2001		#
112	6,253,550 B1	Langenfeld et al.	Jul. 3, 2001		#
113	6,347,453 B1	Mitchell	Feb. 19, 2002		
114	6,381,958 B1	Kamen et al.	May 7, 2002		#
115	6,543,215 B2	Langenfeld et al.	Apr. 8, 2003	`	#

### **Foreign Patent Documents**

Examiner Initials	Reference Number	Document Number	Issue Date	Country	See Sec. 1
/	116	395374	Jul. 12, 1933	Gr. Britain	Sec. I
	117	445033	May 28, 1927	Germany	
,	118	500313	18 Nov. 1954	Italy	
	119	675,161	Jul. 9, 1952	Netherlands	
,	120	689,484	Mar. 25, 1953	Netherlands	
	121	704,002	Feb. 17, 1954	Netherlands	
,	122	892,962	Apr. 4, 1962	Netherlands	
<i>-</i>	123	1,063,612	16 Dec. 1953	France	
	124	1,528,714	8 Mar. 1977	Germany	
*	125	DE 35 00 124 A1	10 Jul. 1986	Germany	
	126	DE 37 34 009 A1	8 Oct. 1987	Germany	
1	127	DE 39 34 545 A1	2 May 1991	Germany	
	128	DE 40 18 943 A1	19 Dec. 1991	Germany	
	129	DE 41 02 306 A1	6 Aug 1992	Germany	
	130	DE 42 05 283 A1	26 Aug 1993	Germany	
/	131	DE 42 19 583 A1	16 Dec. 1993	Germany	
-	132	DE 43 08 888 A1	22 Jul. 994	Germany	
	133	DE 295 20 864 U 1	23 May 1996	Germany	
/	134	DE 198 20 192 A1	26 Nov. 1998	Germany	
- 1	135	EP 0 458 115 A1	06 May 1991	Europe	

0070				
AT TRUE	136	EP 0 607 154 B1	09 July 1992	Europe
X A	137	FR 2 067 119	20 Aug. 1971	France
刻	138	FR 2 609 154	26 Jul 1988	France
A. S.	139	FR 2 721 982	30 Jun 1994	France
ENT	140	G 84 11 960.8	25 Aug. 1988	Germany
	141	JP 02021123	24 Jan.1990	Japan
	142	JP 02091463	30 Mar. 1990	Japan
	143	JP 02256856	17 Oct. 1990	Japan
	144	JP 03009058	16 Jan. 91	Japan
	145	JP 04347410	02 Dec. 1992	Japan
	146	JP 61128024	16 Jun. 1986	Japan
	147	JP 63068759	28 March 1988	Japan
	148	JP 07151402	16 June 1995	Japan
	149	JP 07293334	07 Nov. 1995	Japan
	150	JP 09015197	17 Jan 1997	Japan
	151	JP 56-133597	19 Oct. 1981	Japan
	152	JP 55037540	15 Mar. 1980	Japan
	153	JP 58117995	13 Jul. 1983	Japan
	154	JP 58-25556	08 Aug. 1981	Japan
	155	WO 00/79114 A1	28 Dec. 2000	PCT
	156	WO 90/08891	9 Aug. 1990	PCT
	157	WO 91/05949	2 May 1991	PCT
	158	WO 99/40310	12 Aug 1999	PCT

## **Other Documents**

Ref. No.	Non-Patent References	See Sec. 1	Exam Init.
159	Eder, F., Apparatus for Heat Transfer at Elevated Temperature, to the Working Medium of a Regenerative Thermal Engine ( or "energy engine").	,	
160	Hargreaves, "The Regnerator":, The Phllip's Stirling Engine, 1991		
161	AAVID Thermal Technolgies, Inc., Product Selection Guide, Jan. 1996		
162	Fleming, F. et al, Rapid Recharge Capability of Valve Regulated Lead Acid Batteries for EV & HEV Applications,	1,11,2,77	
163	Anderson, C. et al., The Effects of APU Characteristics on the Design of Hybrid Control Strategies for Hybrid Electric Vehicles, SAE Technical Paper Serie, Feb. 27- Mar. 2, 1995		
164	Dickinson, et al., Performance, Management and Testing Requirement for Hybrid Electric Vehicle Batteries, SAE Technical Paper Series, August 11-13, 199165		

Ref. No.	Non-Patent References	See Sec. 1	Exam Init.
165	Hochgraf, C., et al, Engine Control Strategy for a Series Hybrid Electric Vehicle Incorporating Load-Leveling and Computer Controlled Energy Management, SAE Technical Paper Series,, Feb. 26-29, 1996		
166	Oman, H., New Energy Management Technology Gives Hybrid Cars Long Battery Life, SAE Technical Paper Series, Aug. 2-5, 1999		
167	Hobbs, R. Development of Optimized Fast Charge Algorithms for Lead Acid Batteries, <u>SAE Technical Paper Series</u> , Mar. 1-4, 1999		
168	Wiegman, H., Battery State Control Techniques for Charge Sustaining Applications, <u>SAE Technical Paper Series</u> , Feb. 23-26, 1998		<b></b>

Examiner Signature:	
	£.
Date Considered:	

NOTE FOR EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance AND not considered. Include copy of this form with next communication to applicant.

## Section 6. Copies of Listed Information Items Accompanying This Statement

NOTE: 37 C.F.R. § 198(a)(2) requires that any information disclosure statement filed under § 1.97 shall include:

"A legible copy of .:

- (i) Each U.S. patent application publication and U.S. and foreign patent;
- (ii) Each publication or that portion which caused it to be listed,
- (iii) For each cited pending U.S. application, the application specification including the claims, and any drawing of the application, or that portion of the application which caused it to be listed including any claims directed to that portion. . .

Legible copies of all items listed in Forms PTO/SB/08A and 08B (formerly Form PTO-1449) accompany this information statement.

(complete the following, if applicable)

Exception(s) to above:

US patent application publications and U.S. patents.

Note: the Patent and Trademark Office has waived the requirement under 37 CFR 1.98 (a)(2)(i) for submitting a copy of each cited U.S. patent and each U.S. patent application publication for all U.S. national patent applications filed after June 30, 2003

(Information Disclosure Statement-Section 6. Copies of Listed Information Items Accompanying This Statement [6-1]-

### Section 10. Identification of Person(s) Making This Information **Disclosure Statement**

The person making this statement is

(check	k each applicable item)
(a) □ the inventor(s) who s	igns below
	SIGNATURE OF INVENTOR
	(type or print name of inventor who is signing)
(b) □ an individual associat of this application (37	ed with the filing and prosecution C.F.R. § 1.56(c))
·	SIGNATURE OF INVENTOR
	(type or print name of inventor who is signing)
(c) the practitioner who si	gns below on the basis of the information:
(check	each applicable item)
□ supplied by	the inventor(s).
	an individual associated with the filing and prosecution cation. (37 C.F.R. § 1.56(c))
■ in the practit	ioner's file.
Reg. No.: 48,241	SIGNATURE OF PRACTITIONER
Tel. No.: 617/443-9292	John L. Conway (type or print name of person certifying)
Customer No.: 002101	Bromberg & Sunstein LLP 125 Summer Street

Boston, MA 02110-1618